GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:5094
ANSWERED ON:05.04.2017
Fast Track Translation
Simha Shri Prathap

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Government has initiated projects during the last two years under the Fast Track Translation (FTT) category for innovative research projects under CSIR;
(b) if so, the details thereof along with the projects sanctioned during the last two years; and
(c) the details of MoUs/Agreements signed by CSIR constituent laboratories with National and International institutions during the last two years along with the funds earmarked during the last two years, year-wise and project-wise?

Answer

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES

(SHRI Y.S. CHOWDARY)

(a)&(b) Yes, Madam. Council of Scientific and Industrial Research (CSIR) has initiated 139 projects from 2016-17 under the Fast Track Translation (FTT) category. The details of projects are given in Annexure-I.

(c) The list of MoUs/Agreements signed by CSIR constituent laboratories with National and International Institutions during the last two years is provided in Annexure-II. No funds are separately earmarked for this purpose.

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Annexure-I

Details of Fast Track Translation Projects Sanctioned

S. No. Project Title
1 Paper based affordable microfluidic kit for early pregnancy detection in cattle and buffaloes
2 Development of simple and affordable diagnostic protocols and diagnostic kit for genetic diagnosis of musculipathies and hemoglobinopthies
3 Clinical development of Candidate Drug 99/373 (Anti-osteoporotic)
4 Clinical development of candidate drug 97/78 (anti-malarial)
5 Know-how of the isolation of arabinoxylans from defatted cereal brans
6 Development and production of anti-obesity DAG Oil
7 Non-thermal processing of liquid foods
8 Technology for carbonated fruit juice beverages from selected fruit crops
9 Development of a high yielding variety of Artemisia annua
10 Development of improved variety for high root yield with better quality of Yellow Satawar (Asparagus adscendens Roxb.)
11 Development of a linalool rich cold tolerant Ocimum chemotype
12 Development of with anolide rich, quality root & early maturing advance breeding line with a novel ideotype
13 Calliterpenone for enhancing crop yields
14 GOMED - Platform for Genomics and other Omics technologies for Enabling Medical Decision
15 NGS based high resolution HLA typing kits
16 NGS for mitochondrial diagnosis
17 PulmoScan- Diagnosis and assessment of chronic obstructive lung/ airway disease
18 Developing L-Asparaginase with Low Glutaminase Activity for Therapeutic Applications
19 Process for substituted cyclohexane-1-3-dione synthesis
20 Rapid Assay System and Clinical Validation of Biomarker for Rheumatic Heart Disease
21 Serum and urine-based kits for diagnosis (VL) and post kala-azar dermal leishmaniosis (PKDL) in the field setting
22 Mupirocin + IIIM-1133/06: A topical formulation for improved bio-efficacy
23 Agro-technology transfer and thymol crystal from Jammu monarda
24 IND filling of anti-cancer lead IIIM (N)-290/13 (Cdk inhibitor)
25 Development of biosensors (Indicator-eye Test Range) for detection of adulterants in food products
26 Development of a new real time PCR based system for the quantification of small RNAs and circular RNA and development of a new kit for absolute quantification of miRNAs
27 An electric device for online drinking water disinfection
28 Technology for Recombinant Streptokinase
29 For market-gelsolin estimation kit and gelsolin(s)
30 A universal expression platform for low cost production of bio-therapeutic proteins in S. prmbe

31 Technology Development for production of pullulan
32 Production of a bio-medically important glycolipid bio-surfactant sophorolipid
33 The baine rich opium poppy lines for suitable cultivation through narcotics department
34 Low grain arsenic rice variety for safer human consumption
35 Anacardic acid: A potential molecule to increate cotton fibre yield and quality
36 Development of Zinc Bromine redox flow battery (500 W)
37 Electrochemical remediation of industrial effluents and recovery of chromium
38 Development of accurate, reliable and cost effective sensor for the electrochemical detection of multiple analytes
39 Development of High temperature ceramic Thermal barrier coatings for Missile components
40 Coal dust collecting and briquetting system
41 Waterless chrome tanning
42 High grade gelatin and protein hydrolysate from trimmings
43 Zero Wastewater Discharge Technology
44 Cocktail of carbohydrases for rapid fiber opening
45 Technology for double fortified salt composition containing iron and iodine to control both deficiencies
46 Hollow fiber membrane based high flux domestic filter for water clarification and disinfection
47 Novel cost effective process for high purity solar salt production with reduced contents of carbon, iodine, suspended solids and sulfate content directly in solar salt fields from high sulfate containing brines (particularly for Rajasthan inland/lake brines)
48 A consolidated biomass process for integrated production of multiple products from fresh marine macroalgae
49 Development of multipurpose thermal insulation coatings for different substrates
50 Development of novel processes towards Eribulin, Nicotine, Bedaquiline
51 Discovery of Novel Anticancer Agent (HDAC Inhibitor)
52 Polymeric excipients for pharmaceutical applications
53 Setting up 1 TPD pilot plant for converting waste plastics to diesel
54 Technology demonstration and process flexibility for production of Bio-Aviation fuels
55 Demonstration and Process Validation of Laboratory scale Vacuum Swing Adsorption (VSA) Process for Biogas Up-gradation to Pipeline Quality Fuel from Raw Biogas
56 Development of Adsorption Based Technology for the Production of Ultra Low Sulfur Diesel meeting BS IV /BS VI specification Development Positioning
57 Synthesis of 5-Hydroxymethyl furfural from sacharides
58 Continuous Dinitration for Manufacturing of Pendimethalin
59 Development of penicillin V acylase system for industrial production of semi-synthetic antibiotics
60 Non-vascular self-expandable stents
61 In-situ bioremediation technology
62 Herbal product for management of pain
63 Membrane Based Process Technology for Commercial Production of Biomolecules
64 Modular Bricks from Brahmaputra River Bed Sand
65 IR reflecting rare earth blue pigment for solar heat control cool-roof applications
66 Scaled up process for the upgradation of Low grade of Ilmenites
67 Development of process for large scale production of ÃŸ-glucosidase (BGL) enzyme for blending in biomass hydrolyzing cocktails to be used in Lignocellulosic Biorefineries
68 Aluminium Composite Foams (ACFs) for Crashworthiness Applications
69 Fibre and particulate reinforced hybrid polymeric composite as architectural interior for building construction material
70 Building products using Kota stone cutting and slurry waste
71 Foundation system for light structures
72 Development of a boring machine based on trenchless technology
73 Paper-based Ceramic Separator for Li-ion Battery Application
74 Packaged Fiber Laser Modules for Industrial and Medical Applications
75 Development of Reaction Bonded Silicon Nitride Ceramic Radome
76 Superior Refractory for Induction Furnace to enable Refining of Steel
77 SiAlON Insert for High Speed cutting of hard materials
78 Fast Recovery Trace moisture sensor and meter for detection of trace moisture present in transformer oil
79 Development of novel Ion doped Hydrxyapatite (HAp) by spray drying method and its utilization for plasma spray coating on medical implants with/without ion doping
80 Field deployment of indigenous 4-axis controller for multi-process micro machine
81 Graphene based Aqueous lubricants
82 Development of Domestic Iron Removal Filter
83 Micro Fuel Cell
84 Design and Development of different prototypes of Solar Power Tree for independent area electrification
85 Intelligent and Powered Wheel Chair
86 Process technology for manufacturing of ADI components for mining application
87 Design of Noise Barrier based on different Frequencies
88 Development and evaluation of "Soil Nailing Technique" for stabilisation of soil slope for the construction of underpass below Road traffic
89 Design & Performance of Cement Grouted Bituminous Mix (CGBM) for Urban Roads
90 Electrophoretic Deposition (EPD) for Industrial Application
91 Maximize the recovery of iron values from lean grade iron ore by reduction roasting and pelletisation of high LOI and high Blaine number iron ore fines
92 Process Development for production of flaky graphite, high purity graphite and graphite from natural graphite
93 Recovery of Alumina from fly ash
94 Design and Development of Cost Effective and Advanced Polymer Composite Processing Equipment

95 Fully Autonomous fixed wing mini UAVs under 5.0 kg class - Enhancement of existing UAV models
96 Design, development and certification of Avionics Video and Data FPGA based IP Core
97 VTOL based MAV using indigenously developed electrically driven co-axial motor (VTOL)
98 Development of Medium Wind-Solar Hybrid (WiSH) Systems of 7 − 10 kW class for Agricultural and other rural applications
99 Solar Disinfection Systems for potable water
100 Technology for extraction of tungsten (yellow tungsten oxide or ammonium paratungstate or metallic W-powder) from a variety of scraps
101 Development of Hydrogen standard in Steel
102 Low Phosphorus steel through furnace route using DRI as major ferruginous raw material-an industrial assessment
103 Glass Textile Reinforced Concrete Crash Barrier System
104 Design of Emergency Restoration System for Power Lines
105 ?????? (AHALYA)" RFID based Battery less Wireless Embedded Sensor for Structural Health Monitoring of Reinforced Concrete Structures (Corrosion, Humidity, Temperature)
106 Precast Ferrocement Toilet Core Unit (Prefer Toco)
107 Improved Design and Retrofit Methodology for Seismically Vulnerable Open Ground Storey (OGS) Structures
108 Development of cost effective water tanks using flowable cement mortar
109 Prevention of adulteration in milk-real time remote milk supply monitoring network (PRADUMAN)
110 Handheld milk quality analyser
111 Gas sensor for environmental monitoring
112 Development of 3D rigid and flexible Endoscopes for Denture examination
113 Development of Silent Killer Gas Detector using LTCC Technology
114 High Frequency RF MEMS Capacitive Switches
115 Development of MEMS-based Accelerometer
116 Development of Water Quality Monitoring Watchdog Pod
117 Reading Machine for visually impaired
118 Power Quality Analyser
119 Head gesture based control module for Intelligent Patient Vehicle
120 Postural Stability Assessment System
121 Portable Energy Audit Tool
122 Pump Efficiency Monitoring System
123 AutoCEPH: A software for 2-D Computerized Cephalometric Analysis
124 Earthquake Warning System
125 Touch based Finger Gesture control for Intelligent Patient Vehicle
126 Antiglare Filter for Automobiles
127 Avionics Head Up Display Test Rig
128 Head up Display Mk1N-NP for Naval LCA
129 Head up Display for Intermediate Jet Trainer Aircraft
130 Indigenous development of laser lithotripsy system for medical applications
131 Earthquake hazard assessment of the Himalaya and the Indo-Gangetic plains
132 Imaging sub-volcanic mesozoics in Kerala-Konkan (KK) offshore from wide-angle seismic data (Energy and Mineral Resources)
133 Development of software for High resolution velocity analysis for mapping of gas hydrate deposits/support for strategic sector
134 Microbial consortium for aquaculture waste management and disease control
135 Melanin from sponge associated bacteria
136 Low cost Multipurpose Multichannel data logger unit
137 Low-cost Peltier based refrigerators for rural regions
138 Sunlight sensitized long afterglow phosphor powder & paint
139 Fonoclock with a time synchronization accuracy of Â±10 ms

Annexure-II

Agreements/ MoU signed by CSIR Laboratories/ Institutions during 2014-15

S.No. Title of MOU / Agreement Signed Name of the Institutions (National / International) Date of Agreement (dd/mm/yyyy)
1 . Extension to RMIT-IICT research Centre Agreement, mentioned above. RMIT University, Melbourne, Australia − (International) 18/02/2015
2 . Extraction of different parts of Red Sanders Plant with various polar and non-polar solvents Dept. of Forests, Govt. of Andhra Pradesh, Hyderabad.
10/11/2014
3. Study of antioxidant and molecular mechanism for anti HIV activities of some plant products University of Allahabad, Allahabad 04-02-2015
4 . Dissecting role of critical miRNA in breast cancer in Indian subjects. Department of Surgery, King Georges Medical University, Lucknow 23-02-2015
5. Genetic, epigenetic and transcriptome and proteome analysis of male infertility cases to identify etiological factors behind infertility Dept. of Urology, King Georges Medical University, Lucknow 22-01-2015
6 . Validation of wnt pathway modulation and efficacy study in primary osteoporosis, fracture healing and secondary osteoporosis models for repositioning of clofazimine Department of Orthopaedic Surgery, KGMU, Lucknow 15-12-2014
7. Decoding the ncRNome & Epigenome for Breast Cancer using Big Data analytics on Next Generation Sequencing IIIT, Allahabad 07-11-2014
8. Mesenchymal stem cells with a polymeric scaffold may improve cardiac function in a mouse myocardial model IIT, Madras, Chennai 08-10-2014

9. Antimicrobial resistance analysis of gram-negative bacterial isolates from Micro-JNMC Jawaharlal Nehru Medical College Aligarh Muslim University, Aligarh 23-09-2014
10. Cybernetics of platelet-rich fibrin (PRF) mediated regulation of human gingival fibroblasts (HGF). KGMU, Lucknow 16-09-2014
11. Non-ionizing radiation induced alteration in molecular signaling of ovulation and embryo implantation in mice model BHU, Varanasi 08-09-2014
12. Phylogenetic studies of Mycobacterium tuberculosis isolates on the basis of insertion sequences, direct repeats and variable number of tandem repeats in pulmonary and extra-pulmonary patients KGMU, Lucknow 05-08-2014
13. Role of p53 codon 72 polymorphism on risk of juvenile nasopharyngeal angiofibroma (JNA) KGMU, Lucknow 18-07-2014
14. An indigenous amalgamated/single unit alveolar distractor implant system for oral rehabilitation KGMU, Lucknow 17-07-2014
15. Design, synthesis and anticancer activities of peptide based molecules IISc Deemed University, Bangalore 15-07-2014
16. Design, synthesis and evaluation of antitubercular compounds National Jalma Institute of Leprosy & other Mycobacterium Diseases,Agra 11-07-2014
17. Augmentation of effector immune responses using immunomodulators in conjunction with chemotherapy against experimental Visceral Leishmaniasis KGMU, Lucknow 02-07-2014
18. Collaborative research program in specific field of mutual interest BBDU, Lucknow 18-06-2014
19. Delineation of Rac1 signaling association with PCOS pathophysiology KGMU, Lucknow 15-04-2014
20. - Depositing microbial cultures collected at SRISTI from soil samples of remote areas of country (along with the details as per MTCC guidelines) at CSIR-IMTECH.

- Developing long term R&D strategies and plan of action for the microbial cultures deposited. Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI), Ahmedabad
09-05-2014
21. Assessment of Impact of Transgenic Brassica Juncea (mustard) on Soil Microflora (SSP-64) University of Delhi, South Campus 09-01-2015
22. Role of small GTPase and their effectors in regulating phago-lysosome fusion and microbial clearance Indian Institute of Science Education and Research (IISER)-Mohali 24-06- 2014
23. Antimicrobial activity of sugar analogues of ricinoleic acids and other scaffolds National Institute of Pharmaceutical Education and Research (NIPER), Mohali 25-06- 2014
24. Investigations on Quorum Sensing Inhibitor (QSI) produced by a Novel Actinomycetes National Institute of Pharmaceutical Education and Research (NIPER), Mohali 2014
25. Suppression of type-1 diabetes in non-obese diabetic (NOD) mice by induction of colonic regulatory T-cells Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh 18-09-2014
26. Research and educational cooperation on Coastal processes and Coastal engineering. National Institute of Technology, Karnataka. 08.04.2014
27. Research and educational cooperation. The Energy and Resources Institute (TERI), New Delhi / Goa 28.04.2014
28. Research Collaboration on Mud banks and Assessment of Fishery potential along the Malabar Coast. Central Marine Fisheries Research Institute, Kochi, Kerala. 07.07.2014
29. Research and educational cooperation in Marine Archaeology Archaeological Survey of India, New Delhi. 22.08.2014
30. Research collaboration in Marine Sciences Qatar University, Doha.(International) 31.12.2014
31. Research and educational cooperation in Marine Archaeology Deccan College PG Research Institute, Pune. 13.01.2015
32. Educational and research cooperation D.M.'s College of Arts, Science, Commerce and Management Studies, Goa. 13.01.2015
33. Research and educational cooperation on Marine gas hydrates Geological Survey of India, Mangalore/New Delhi. 09.02.2015
34. Research cooperation in climate, ocean and earth sciences. Japan Agency for Marine-Earth Science and Technology, Japan (International) 26.02.2015
35. Improving the quality of salt produced by marginal agarias at Adesar region in Kutch district through technology upgrading and improving their quality of life through additional income (funded by IC, GoG) Agariya Heet Rakshak Manch, Ahmedabad 05.09.2014
36. Beneficiation study of glauconitic sandstone from Satna District, Madhya Pradesh Adelika Research & Agricultural Institute, Mumbai 23.03.2015
37. Subgrant Agreement Univ. of Toronto, Canada (International) 26-11-2014
38. Research Collaboration Agreement National University of Singapore, Singapore (International) 01-01-2015
39. Academic Cranfield University, UK (International) 23.05.2014
40. Academic Indian Institute of Technology (Banaras Hindu University), Varanasi 31.05.2014
41. Academic University Institute of Chemical Technology, Jalgaon 25.09.2014
42. Study to examine the possibility of Production of Naphthenic Base Oil and Paraffin Wax from Waxy Distillate Streams CSIR-IIP, Dehradun-AoD,IOCL,Digboi, Assam and CHT,Noida 21.10.2014
43. Academic Central University of Jharkhand 03.01.2015
44. Academic Manav Rachna International University, Faridabad 20.02.2015
45. Academic Indian Institute of Technology, Mandi 26.02.2015
46. Biotechnology M/s. Energy and Research Institute, Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi - 110003 17.04.2014
47. MOU between IISER, TVPM &NIIST (Patent) M/s. Indian Institute of Science Education and Research, Ministry of Human Resources, Government of India, situated at Computer Science Building, College of Engineering, Thiruvananthapuram - 695016 05.05.2014
48. MOU with JNTBGRI M/s. Jawaharlal Nehru Tropical Botanic Garden and Research Institute, palode, Trivandrum, Kerala - 695562 26.06.2014
49. MOU with Swaminathan Foundation M/s. MS Swaminathan Research Foundation (MSSRF) a non profit research organisation, 3rd cross street, Institutional Area, Taramani, Chennai - 600 113, India 08.07.2014
50. Coir Fibre composite for acoustic application. M/s. Institute of Indian Interior Designers (IIID), 2nd Floor, Alpha Plaza, K.P.Vallon Road, Kadavanthara, Kochi - 682020 24.07.2014
51. MOU with RCC M/s. Regional Cancer Centre, Post Box No-2417, Medical College Campus, Trivandrum - 695 011 01.09.2014
52. MOU with RCC M/s. Regional Cancer Centre, Trivandrum 16.10.2014

53. Structural data for new ceramic complex oxides M/s. International Centre for Diffraction Data, 12 Campus Boulevard, Newtown Square, PA 19073-3273, USA (International) 12.12.2014
54. Young Investigators Programme GAP 124139 Kerala Biotechnology Commission, KSCSTE, Sasthra Bhavan, Pattom, Thiruvananthapuram - 695 004 25.03.2015
55. Geophysical investigations for the proposed Ponnaiyar (Nedungal) − Palar Intra-state link project of Tamil Nadu. National Water Development Agency &CSIR-NGRI 09.07.2014
56. Establish scientific co-operation between CSIR-NGRI and BRGM in the field of ground water through setting up of a research centre. CSIR-NGRI & BRGM
(Bureau de Recherches Geologiques et MiniÃ¨res)
(International) 20.11.2014
57.
Supply, Installation and commissioning of Digital Strong Motion Accelerographs in NSRS Srisailam Dam Govt. of A.P (Irrigation & CAD Department) & CSIR-NGRI 05.11.2014
58. Development of Decision Support Tool (DST) for sustainable water management in irrigation in India WWF-India & CSIR-NGRI 07.01.2015
59. Mapping subsurface hard rock complex geological terrain for groundwater prospecting in the new campus at IIAB, Ranchi CSIR-NGRI & Indian Institute of Agricultural Biotechnology 13.01.2015
60. Basic Research into the exploitation of the economic development potentials of critical raw materials in international co-operation University of Miskolc (International) 22-04-2014
61. Energy efficient Coke based Brass and Bell Metal Melting Furnace Technical Training Institute, Balasore, Odissa 09-05-2014
62. Dephosphorization of steel made through induction melting NISST , AIIFA, National institute of secondary steel technology, Punjab 05-08-2014
63. Development of Magnesium Metal Production Technology (MPT) IIT Kharagpur, Chemical Engineering Dept. 27-10-2014
64. Feasibility studies on the development of gadolinium metal by fused salt electrolysis of gadolinium chloride IGCAR 22-12-2014
65. Collaborative Research Work Bose Institute (Kolkata) 12.11.2014
66. Collaborative Research Saroj Gupta Cancer Centre and Research Institute, Kolkata 04.03.2015
67. Memorandum of Understanding VIT Vellore, TN 24-04-2014
68. MoU signed on "Design & Development of Beam Stoppers" for FAIR Project as in kind contribution from India and BI-IFC Bose Institute (Bose Institute-Indo FAIR Co-ordination Centre), P 1/12, Kolkata-54 22.07.2014
69. MoU signed on "Multibody Dynamics and Hydrodynamics of Underwater Mobile Manipulator Interacting with Environment: Modeling and Analysis" Indian Institute of Technology, Delhi 06.08.2014
70. Agreement signed for Project entitled "Design, Development, Integration and Implementation of High Power Wireless Control Interface and Camera for Mobile Robotic System" Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam-603102, Karnataka 31.12.2014
71. MoU signed on project entitled "Numerical Simulation of Blast Wave within a open ended shock tube and its interaction with generic for pressure ratios from 3 to 30" DRDO, Min. of Defence, Govt. of India, DRDP Bhawan, Rajaji Marg, New Delhi 02.03.2015
72. MoU signed for carrying out related R&D under joint supervision of ISM & CMERI as per rules & regulations Indian School of Mines (ISM), Dhanbad 25.02.2015
73. MoU on for collaborative R&D activities between CSIR-CMERI & NIT, Durgapur -713209 National Institute of Technology, Durgapur-713209, WB 07.04.2015
74. MoU to support R&D activities of CSIR-CMERI by providing design & manufacturing of various allied equipments and accessories at IDTR IDTR, Jamshedpur-832108 11.06.2015
75. Agreement signed for project entitled 'Surface Coating of Nylon and Stainless Steel using Graphene based Composite Materials'. Chonbuk National University, South Korea (International) 10.11.2014
76. Research cooperation in the area of plasma processing of minerals and materials Montanuniversitaet, Leoben, Austria (International) Oct 2014
77. Popularizing the bacterial blight resistant rice variety Improved Samba Mahsuri and in areas of mutual interest Acharya N.G. Ranga Agrl. University, Hyderabad 11-07-2014
78. Licensing Improved Samba Mahsuri to Metahelix to take up its commercial seed production and marketing in India Directorate of Rice Research, Hyderabad and Metahelix Life Sciences, Hyderabad 08-01-2015
79. Effects of small heat shock proteins on self renewal in adult mesenchymal stem cells MNR Dental College & Hospital, Medak District 27-01-2015
80. Studies on chronic meningitis to search biomarkers for its early diagnosis using mass spectrometry based quantitative proteomics NIMHANS, Bangalore 25-02-2015
81. Studies on pre/post diabetic groups to search biomarkers for its early diagnosis using mass spectrometry based quantitative proteomics Madras Diabetes Research Foundation, Chennai 26-02-2015
82. Natural ingredients from India and their use in the cosmetic and/or demopharmaceutical fields CSIR-IIIM and LVMH Recherche, France (International) 14/10/2015
83. "Discovery of natural products based new preclinical leads for cancer chemoprevention and neurodegenerative diseases CSIR-IIIM and De Montfort university, UK (International) 24/04/2015
84. "Discovery of disease modifying therapeutics for Alzheimers disease" CSIR-IIIM and the university of Lousiana(ULM) at Monroe USA (International) 01/04/2015
85. Academic and Research Linkage VIT Vellore, TN 24-04-2014
86. Academic and Research Linkage UIET, Panjab University Chandigarh 08-05-2014
87. Academic and Research Linkage Jain University, IIAEM 11-07-2014
88. Establishing Centre of Excellence in Composites MHRD, Govt. of India, New Delhi 08-08-2014
89. Academic and Research Linkage Sathayabhama University Chennai 20-08-2014
90. Exploring Business opportunities of mutual Interest MSC software corporation, California, USA (International) 02-09-2014
91. DRISHTI Transmissometer RTPL and AGI UK (International) 19-12-2014
92. Academic and Research Linkage SIT Tumkur 24-01-2015
93. video of autoclave complex BMI Bangalore 09-02-2015

94. Development of hydroxyapatite based modified integrated orbital implant with superior motility and its clinical trial. Society for Biomedical Technology, Defence Bioengineering and Electromedical Laboratory (DEBEL), PB No.9326, CV Raman Nagar, Bangalore-560093 29.04.2014
95. Collaborative work on Aromatic plants and essential oils Fragrance and flavor development Centre, Ministry of MSME Government of India Kannauj 31.01.2015
96. MoU between CSIR-IGIB and The Neuroscience Centre, AIIMS, for collaborative research The Neuro Science Centre, AIIMS, Delhi 01-05-2014
97. MoU between CSIR-IGIB and D.Y. Patil University, Dermatology Department, Pune for collaborative research
D.Y. Patil University, Dermatology Department, Pune 30-May-14
98. MoU between CSIR-IGIB and KEM HOSPITAL RESEARCH CENTRE - Vadu Rural Health Program, Maharashtra for collaborative research KEM HOSPITAL RESEARCH CENTRE - Vadu Rural Health Program 25-10-2014
99. MoU between CSIR-IGIB and All India Institute of Medical Sciences, (Division of Nephrology, Department of Pediatrics for collaborative research Division of Nephrology, Dept. of Pediatrics, AIIMS, New Delhi 25-03-2015
100. Effect of Radiolytic Products and Metal Nitrates on Red Oil Forming Substances Atomic Energy Regulatory Board, Mumbai (AERB) Apr-2014

Agreements/ MoU signed by CSIR Laboratories/ Institutions during 2015-16

S. No Title of MOU / Agreement Signed Name of the Institutions (National / International) Date of Agreement (dd/mm/yyyy)
1. The exchange of students and for Collaborative Projects in the area of mutual interest for promoting education, research, training, extension & technical guidance. Adikavi Nannaya University, A.P
05/10/2015

2. Extension to RMIT-IICT research Centre Agreement, mentioned above. RMIT University, Melbourne, Australia − (International) 18/03/2016

3. Pharmacokinetic studies of radioprotective formulation prepared from active principles isolated from Podophyllum hexandrum Institute of Nuclear Medicine & Allied Sciences, Defence Research & Development Organization (DRDO), Delhi 19-02-2016
4. To study the biological activity (such as anti-tubarcular) of 1,2,3-triazole containing compounds Department of Chemistry, Dibrugarh University, Assam 23-12-2015

5. Assessment of serum leptin, insulin, HbA1c and blood glucose levels and its correlation with HOMA-IR Dept of Biochemistry & Dept. of Medicine, King Georges Medical University, Lucknow 30-12-2015

6. To investigate whether Lipocalin 2 (in mice) NGAL9 (in human) is a part of DNA decoration along with MPO, elastase etc in neutrophil extracellular traps (NETs) Pennsylvania State University, University Park, USA (International) 03-02-2016
7. The Effect of Aloe Vera on human gingival fibroblast (hGF) − an in vitro study BBD College of Dental Sciences, BBD University, Lucknow 15-10-2015
8. Evaluation of morphological and biochemical changes in human gingival fibroblast (hGF) treated with Acacia nilotica BBD College of Dental Sciences, BBD University, Lucknow 15-10-2015
9. Immunological characterization of recombinant culture filtrate proteins from ESAT-6 family of Mycobacterium tuberculosis H37Rv Department of Pulmonary Medicine, KGMU, Lucknow 01-05-2015
10. Habitat ecology and species diversity of Cordyceps in district Pithoragarh, Central Himalaya Department of Zoology, LSM Government Postgraduate College, Pithoragarh 21-04-2015
11. Moonlighting behavior of GAPDH National Institute of Pharmaceutical Education and Research (NIPER), Mohali 25-05-2015
12. Bacteriocins and bacteriocinogenic bacteria as potential bio-therapeutics in management of oral biofilm associated diseases Dr. H.S. Judge Institute of Dental Sciences and Hospital, Punjab University, Sector-25, Chandigarh 24-08-2015
13. Identification of explosives degrading microbes by culture dependent/ independent approach. DRDO, Centre for Fire, Explosive and Environment Safety, Timarpur, Delhi 08-12-2015
14. Self-adjuvanting lipidated peptides as vaccine against tuberculosis. Panjab University, Chandigarh 04-09-2015
15. Research and educational cooperation on the Oceanography of Bay of Bengal, University of Dhaka, Bangladesh.
(International) 07.06.2015
16. Research and educational cooperation in marine technology. BITS Pilani, K. K. Birla Goa Campus. 23.07.2015
17. Research collaboration on viral ecology. Laboratory Microorganisms: Genome and Environment, France
(International) 26.09.2015
18. Sharing applied R&D with District Administration of Bhavnagar for societal initiatives like water purification, cultivation of seaweeds, double fortified salt, waste to energy, skill development etc. District Administration, Bhavnagar 28.09.2015
19. Memorandum of Understanding Pandit Deendayal Petroleum University 25-09-2015
20. Memorandum of Understanding Shroff SR Rotary Institute of Chemical Technology, Ankleshwar 04-11-2015
21. MOU for Research Project Central Tasar Research and Training Institute, Ranchi (Central Silk Board) 21-04-2016
22. Accelerated Carbonation of Wastes for valorization and Carbon sequestration in India Dept. of Environment and Materials Engineering, University of Greenwich, United Kingdom (International) 17-09-2015
23. Al-Graphene/CNT−SIC particle reinforced composite University of Missouri, USA
(International) 03.09.2015
24. Academic Indian Institute of Guwahati 10.07.2015
25. MOU with RCC GAP 136839 Regional Cancer Centre, Post Box No-2417, Medical College Campus, Trivandrum - 695 011 18.09.2015
26. Agreement for Collaboration Osaka University, Japan (International)

27. Biodrying: A comprehensive model waste management scheme for Kerala Department of Environment and Climate change, Government of Kerala, Devikripa, Pallimukku, Pettah.P.O, Thiruvananthapuram 29.01.2016
28. Agreement for Collaborative Research between KSID and CSIR for developing coir-composite chair Kerala State Institute of Design, Established by the Govt. of Kerala, Chanthanathope P.O., Kollam - 14 02.03.2016
29. Biogas generation using Anaerobis digester SCT College of Engineering 04.03.2016
30. Energy Efficient Coke Based Brass Melting Furnace West Bengal khadi & village Industry, Kolkata 13-01-2015
31. Fracture experiments on CT, TPB and instrumented charpy specimens to evaluate fracture toughness v/s temperature curves at various loading rates. BARC, Mumbai 29-05-2015
32. Microstructural Characterization & Fractographic Analyses of Nuclear Grade Graphite BARC, Mumbai 24-08-2015
33. Consultancy services on quality assurance of welding for fabrication of the steel gates, stop log gates, HR gates, hoist bridge and trestle for kharkai barra Kharkai Canal Division, Adityapure, Subernrekha multipurpose project, Water Resource Department, Govt. of Jharkhand 14-12-2015
34. Collaborative project on " Computer aided simulation of magnesium reactor" IIT Kharagpur, West Bengal 06-01-2016
35. Collaborative Research Medical College and Hospital, Kolkata 09.07.2015
36. Facility providing NIPER, Kolkata 26.09.2016
37. MOU between CSIR-4PI and Indian Institute of Astrophysics Indian Institute of Astrophysics, Bangalore 05/06/2015
38. Consortium Agreement IIT's (Bombay, Delhi, Hyderabad, Kanpur, Madras, Kharagpur), IISER (Bhopal, Mohali), CSIR-NPL, C-DAC, PRL, IITM, NARL, University of Kashmir, BIT, Bose Institute, Darjeeling, CSIR-NEIST 29/01/2016
39. MoU Central Institute of Plastics Engineering and Technology, Ahmedabad 30.10.2015
40. MoU King George's Medical University, Lucknow 14.12.2015
41. MoU Institute of Life Sciences, Ahmedabad University, Ahmedabad 11.02.2015
42. Agreement signed for project entitled 'Surface Coating of Nylon and Stainless Steel using Graphene based Composite Materials'. Chonbuk National University, South Korea (International) 14-09-2015
43. Extension of MoU Between Earth Engineering Center of Columbia University and CSIR-NEERI for WTERT-India 07.10.2015
44. Small−Scale Funding Agreement Between United Nations Environment Programme, Geneva, Switzerland (International) 17.10.2015
45. Technical Support to conduct water quality assessment of the islands in Lamu Atoll Between World Health Organization, Maldives (International) 01.12.2015
46. Material Transfer Agreement With University of Minho, Largo do Paco, Braga, Portugal and
Institute of Molecular and Cell Biology, University of Tartu, Estonia (International) 21.01.2016
47. Small Scale Funding Agreement Between United Nations Environment Programme (UNEP) (International) 17.10.2015
48. For development & testing of a newly developed water purification and sensing device University of Utah, US & ESPIRA India Envirotec Pvt. Ltd. Vadodara (Multinational) May 2015
49. Research and academic cooperation in core area of expertise Indian School of Mines, Dhanbad Apr 2015
50. Research and academic cooperation in core area of expertise University of Ilorin, Nigeria (International) Aug 2015
51. Undertaking joint collaborative projects with a focus on a range of areas of mutual interest. Institute to Institute MOU Sunshine Medical Academy of Research & Training, Hyderabad 01-06-2015
52. Molecular cross talks between defense pathways in rice: antagonism to Synergism Directorate of Rice Research & Agri Biotech. Foundation, Hyderabad 22-07-2015
53. Understanding of ancient human genome and comparative genomics which will provide a lead in identifying the putative disease causing mutation(s) Deccan College Post Graduate and Research Institute, Pune 30-12-2015
54. Fabrication, Installation and Commissioning of DRISHTI Visibility measuring systems India Meteorological Department, Government of India, New Delhi 20-05-2015
55. Internal reforming solid oxide fuel cell IISc, Bangalore 22-05-2015
56. Development of Cf/SiC ceramic matric composites through CVI BARC, Mumbai 20-08-2015
57. Development of SiC coating IGCAR, Kalpakkam 8-09-2015
58. Academic and Research Linkage AIT Bangalore 12-03-2016
59. Academic and Research Linkage JNCA Bangalore 28-03--2016
60. Collaborative work on dissemination of medicinal and aromatic plants based technologies Mizoram University 10-07-2015

61. Collaborative work on research of medicinal and aromatic plants based technologies King George's Medical University, Lucknow 08-09-2015
62. Collaborative work on research of medicinal and aromatic plants based technologies Dr. A.P.J. Abdul Kalam Technical University 12-01-2016
63. MoU between CSIR-IGIB and Delhi Institute of Pharmaceutical Sciences and Research, for collaborative research Delhi Institute of Pharmaceutical Sciences and Research, Govt of NCT of Delhi, Affiliated to University of Delhi, Delhi 10-04-2015
64. MoU between CSIR-IGIB and Indraprastha Institute of Information Technology, for collaborative research Indraprastha Institute of Information Technology, New Delhi 10-04-2015
65. MoU between CSIR-IGIB and Tirunelveli Medical College,
Tirunelveli for collaborative research Tirunelveli Medical College, Tirunelveli 01-10-2015